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IMPACT OF POINT-OF-CARE PLATELET FUNCTION TESTING AMONG PATIENTS WITH AND WITHOUT ACUTE CORONARY SYNDROMES UNDERGOING PCI WITH DRUG-ELUTING STENTS: AN ADAPT-DES SUBSTUDY

Oral Contributions
West, Room 2005
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Background: Patients with acute coronary syndromes (ACS) who undergo stent implantation have higher on-treatment platelet reactivity (HPR), which has been associated with thrombotic events including increased risk of stent thrombosis (ST).

Methods: ADAPT-DES was a prospective multicenter observational study of 8,583 unselected patients undergoing DES implantation; routine platelet function testing was performed with the VerifyNow P2Y12 assay following clopidogrel loading. We examined the association between HPR and ST and bleeding events in patients with and without ACS enrolled in ADAPT-DES. One year results for the ACS population are now available.

Results: 4,436 patients (51.7%) had ACS with 95.9% completing 1 year follow up. After clopidogrel loading, patients with ACS had higher platelet reactivity units (PRU) (194 vs. 182 for no ACS, p<0.0001). Of the 70 total one year definite/probable ST, 50 (71.4%) occurred among patients with ACS; as such, 1 year ST was more frequent among ACS patients (Figure). HPR was independently associated with 1 year ST in ACS (adjusted HR for PRU>208=2.6 (95% CI 1.33-5.07), p=0.005), whereas the relationship was weaker and non-significant for patients without ACS (adjusted HR for PRU>208=1.44 (95% CI 0.53-3.88), p=0.47).

Conclusions: Most ST events in the first year after DES occur in patients with ACS, and HPR is strongly associated with ST in ACS. However, due in part to low overall event rates, HPR was not independently associated with ST among patients without ACS.